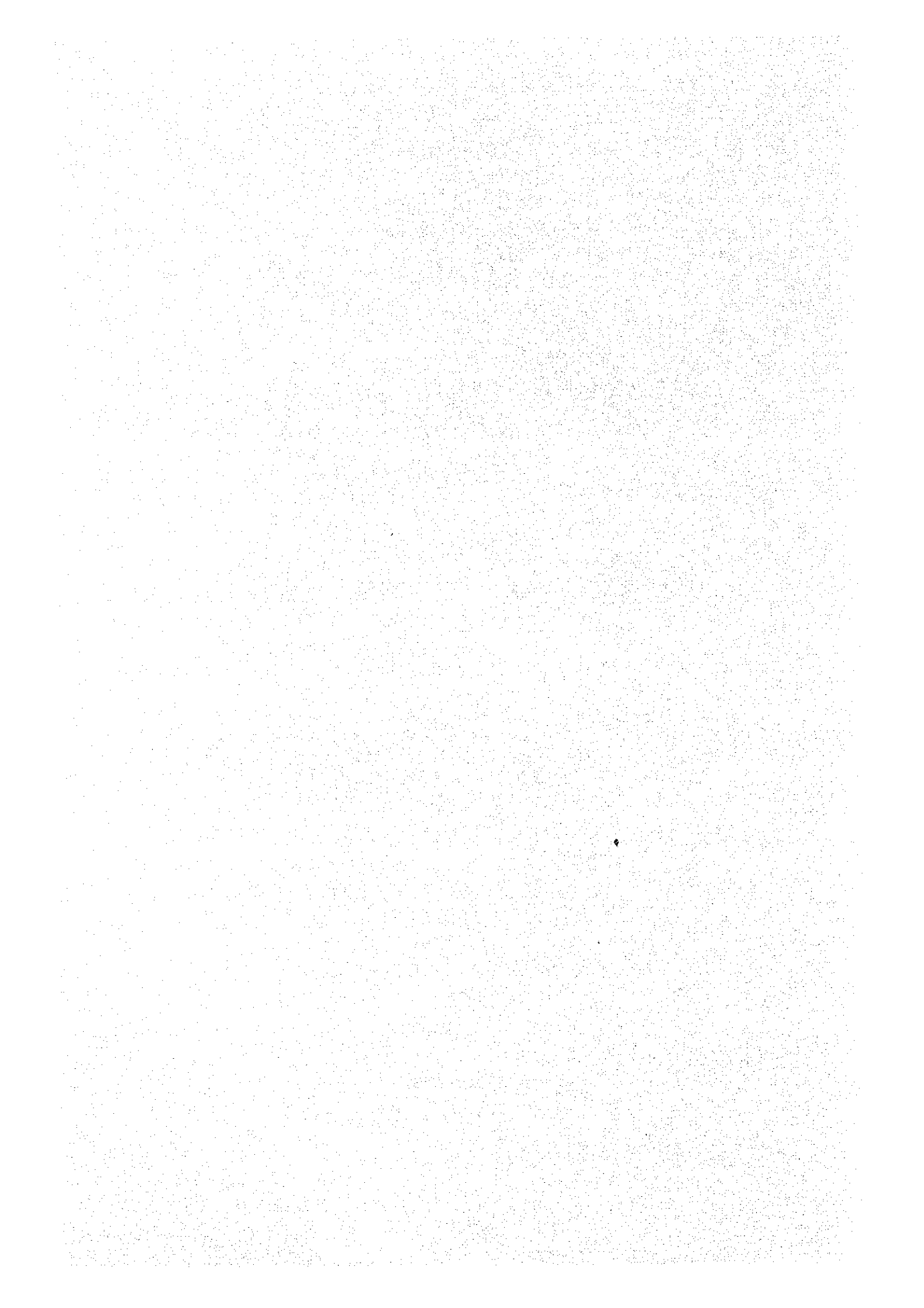


Chapter 4 TENTATIVE IMPLEMENTATION SCHEDULE AND SCOPE OF THE PROJECT

4-1 TENTATIVE IMPLEMENTATION
SCHEDULE

4-2 SCOPE OF THE PROJECT



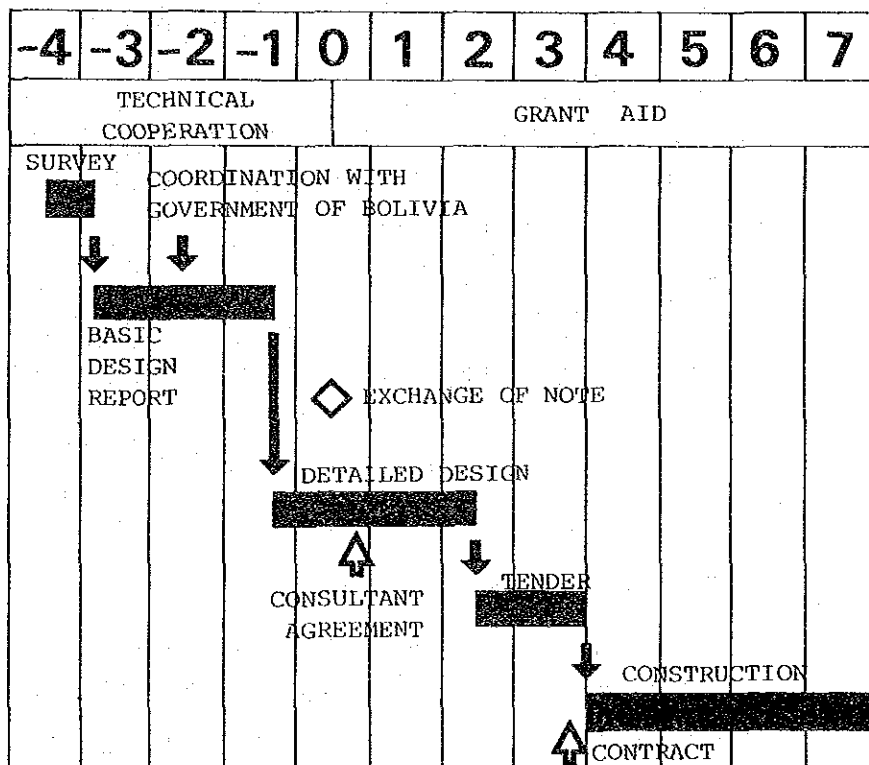
Chapter 4 TENTATIVE IMPLEMENTATION SCHEDULE AND SCOPE OF THE PROJECT

4-1 TENTATIVE IMPLEMENTATION SCHEDULE

Since the project is to be implemented under the grant aid program, the schedule is tentatively set as shown below.

The overall schedule is divided into (1) the present basic design survey by technical cooperation, and (2) the detailed design, construction works, and supervision. Subsequent to the present basic design survey, the detailed design is to be started, comprising preparations of drawings and specifications necessary for construction, preparations of tendering, and construction contract documents. Among the work to be undertaken by the Government of Bolivia, the grading of part of the site and the removal of the existing buildings are to be completed prior to the commencement of the construction works by the Japanese Contractor.

Table 4-1. TENTATIVE IMPLEMENTATION SCHEDULE



4-2 SCOPE OF THE PROJECT

The scope and the responsibilities of the project was discussed between the basic design survey team and officials concerned of the Government of Bolivia on several occasions and basically determined by the governments concerned as prescribed in the Minutes of Discussion (see Appendix I) and as restated below;

4-2-1 Work to be undertaken by the Japanese Government (Grant Aid)

1) Consulting service

Detailed design and supervision of construction.

2) Construction of the buildings and supply of equipment

- a. School building (See Chapter 6)
- b. Dormitory (See Chapter 6)
- c. Equipment (See Section 3-3)

4-2-2 Work to be undertaken by the Bolivian Government

1) Geotechnical investigation of the proposed site

- a. Site measuring
- b. Boring tests (See Appendix I) and preparation of the report.
- c. Topographic survey, and preparation of the final report upon the findings.

2) Site preparation

- a. Demolition and removal of buildings including foundations and most of the trees
- b. Demolition and removal of laying
- c. Site clearing and levelling

3) Utility service

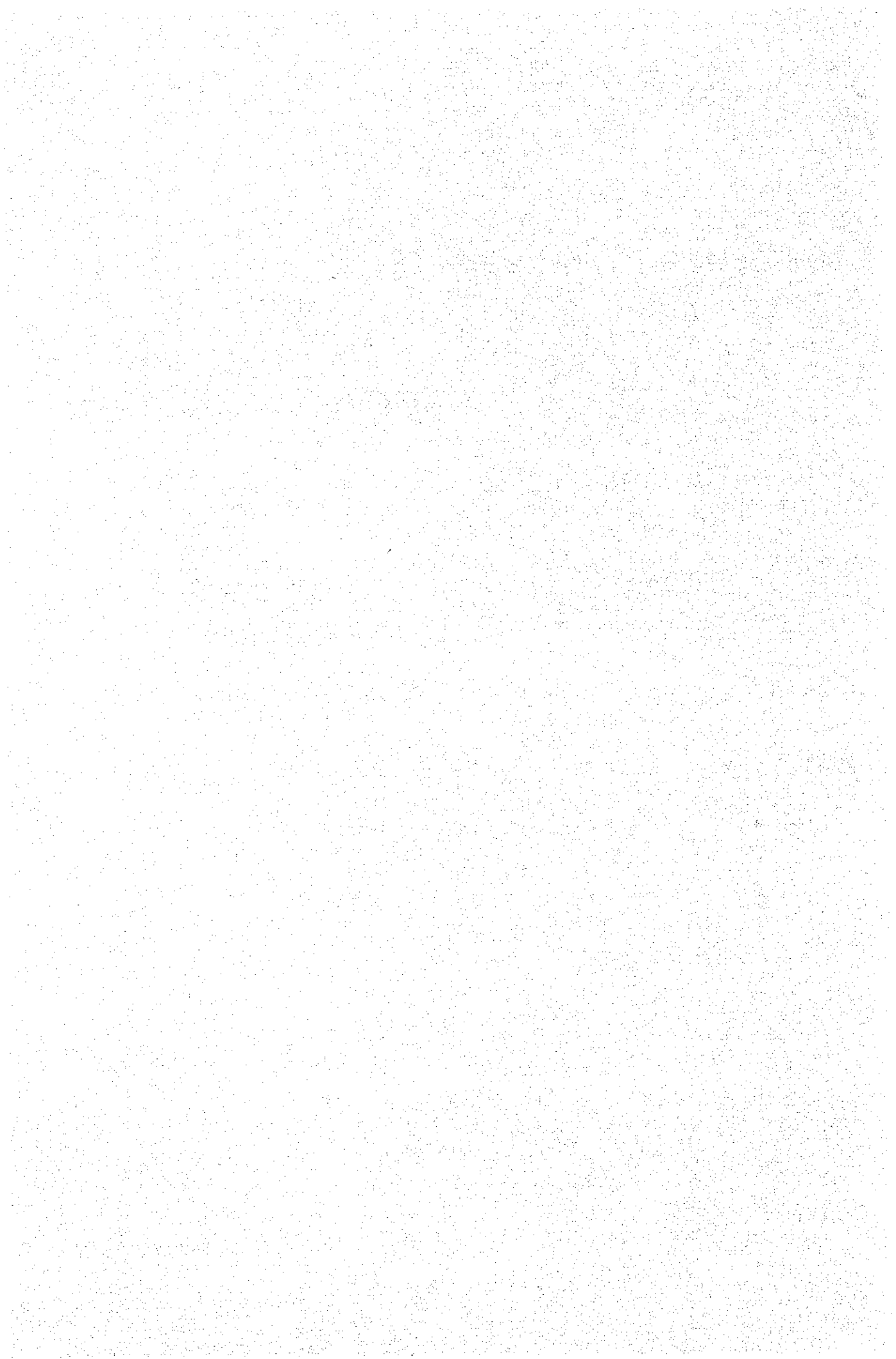
- a. Electric power supply to the site on a temporary basis during the period of construction and to the main electric pannel of the forth-coming ESCUELA TECNICA NACIONAL DE SALUD PUBLICA.

- b. City water supply to the site on a temporary basis during the period of construction and to the main water meter of the submain branch (2") leading to the forth coming ESCUELA TECNICA NACIONAL DE SALUD PUBLICA.
 - c. Drainage and sewage to the city main and/or sewage system during the period of construction and to the main pipe to the forth-coming ESCUELA TECNICA NACIONAL DE SALUD PUBLICA.
 - d. Telephone wiring to the site on a temporary basis during the period of construction and to the M.D.F. of the forth-coming ESCUELA TECNICA NACIONAL DE SALUD PUBLICA.
- 4) Site work
- Planting, roads within the site, fences, gates, a gate office, parking lots and exterior lighting.
- 5) Furniture
- Furniture except for educational use and office equipment.
- 6) Others
- a. To ensure prompt unloading and customs clearance of imported materials and equipment for the scheduled ESCUELA TECNICA NACIONAL DE SALUD PUBLICA and also to facilitate their internal transportation in the Republic of Bolivia.
 - b. To exempt Japanese nationals concerned from customs duties, internal taxes and charges which may be imposed in the Republic of Bolivia on the occasion of the supply of goods and service for the construction of the scheduled ESCUELA TECNICA NACIONAL DE SALUD PUBLICA.
 - c. To provide and authorize necessary permissions, licenses and other authorizations required for the construction of the ESCUELA TECNICA NACIONAL DE SALUD PUBLICA.
 - d. To allocate the fund necessary for the operation and maintenance of the scheduled ESCUELA TECNICA NACIONAL DE SALUD PUBLICA.

Chapter 5 CONCLUSION

5-1 FEASIBILITY OF THE
PROJECT

5-2 RECOMMENDATIONS



Chapter 5 CONCLUSION

5-1 FEASIBILITY OF THE PROJECT

The proposed ESCUELA TECNICA NACIONAL DE SALUD PUBLICA is to enroll applicants from over the country and train practical nurses, X-ray technicians, clinical technicians, health and hygiene specialists and nutrition specialists. The trainees should complete the required curricula including clinical training at a hospital and sit for a qualifying examination to be formally accredited. The qualified graduates are required to work as employees of the Government, either serving isolated rural communities or as technicians at hospitals in urban municipalities.

As mentioned already in Section 1-1 of Chapter I, the Government of Bolivia is planning to institute better coordination and integration of medical services in urban areas and establish Integrated Rural Development Units in rural areas. Graduates of the proposed school are expected mostly to participate in the rural health program. Practical nurses, health and hygiene specialists and nutrition specialists will be largely assigned to sanitary or medical posts. They will administer primary health care and preventive medicine, engage in health education and consulting, and propagate the basic knowledge in hygiene and nutrition (inclusive of surveys on edible wild plants and education with regard to the improved methods of food storage and preparations).

Clinical technicians and X-ray technicians will be assigned to the central health hospitals and medical posts so as to improve rural medical standards.

The proposed school will serve to remedy the problems of high fertility and high mortality, in particular, extremely high infant mortality, and thereby contribute to the extension of the life expectancy at birth. It goes without saying that the smooth operation of the school will improve the public health administration and upgrade the technical standards of medical services in the Republic of Bolivia. Moreover, the graduates of the school will be able to work for the medical faculties of the

universities and national hospitals, thus contributing to the advancement of basic medical sciences.

Judging from the above, the grant aid for ESCUELA TECNICA NACIONAL DE SALUD PUBLICA will be most timely to be given to the Government of Bolivia to minimize the loaded assignment and to build a stepping stone for the improvement of medical services throughout the country.

5-2 RECOMMENDATIONS

In order to ensure the high quality of education and training at the proposed ESCUELA TECNICA NACIONAL DE SALUD PUBLICA, it is desirable that the Government of Bolivia systematically puts into effect the following measures;

- 1) It is necessary to establish school regulations and to secure competent teaching staff.
- 2) It is urgently needed to institute an effective program for training the teaching staff, because each course out of five at the school requires specialized expertise and experience. If deemed necessary, it is advisable to train them at some overseas institutions.
- 3) It is requisite to allocate a sufficient amount of budget for the annual operation and maintenance of the school. It will be especially necessary to make sufficient provisions in order to ensure the supply of competent teaching and general staff, the adequate maintenance and replacement of the equipment, the prompt and continued procurement of the teaching materials, etc.
- 4) In order to provide clinical training opportunities for the trainees, it is indispensable to secure provisions of instructors, equipment and instruments at hospitals which will accept the trainees.
- 5) It is necessary to institute a qualifying system whereby the prospective practical nurses, clinical and X-ray technicians, health and hygiene specialists and nutrition specialists are examined as to their competence and mastery of the respective skills. This will serve to maintain and raise the technical standards of the paramedics.
- 6) It is desirable to lengthen and diversify the curricula at a later date in order to raise the levels of training offered at the school.

Chapter 6 DRAWINGS

SITE PLAN

SCHOOL

GROUND FLOOR PLAN

1ST. FLOOR PLAN

ELEVATION AND
SECTION

DORMITORY

GROUND AND 1ST
FLOOR PLAN

ELEVATION AND
SECTION

AVENIDA ANICETO ARCE

MAIN ENTRANCE

GUARD HOUSE

PARKING

SCHOOL

PATIO

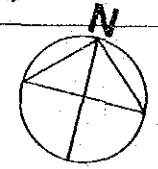
ELEVATED
TASH

SUB ENTRANCE

DORMITORY

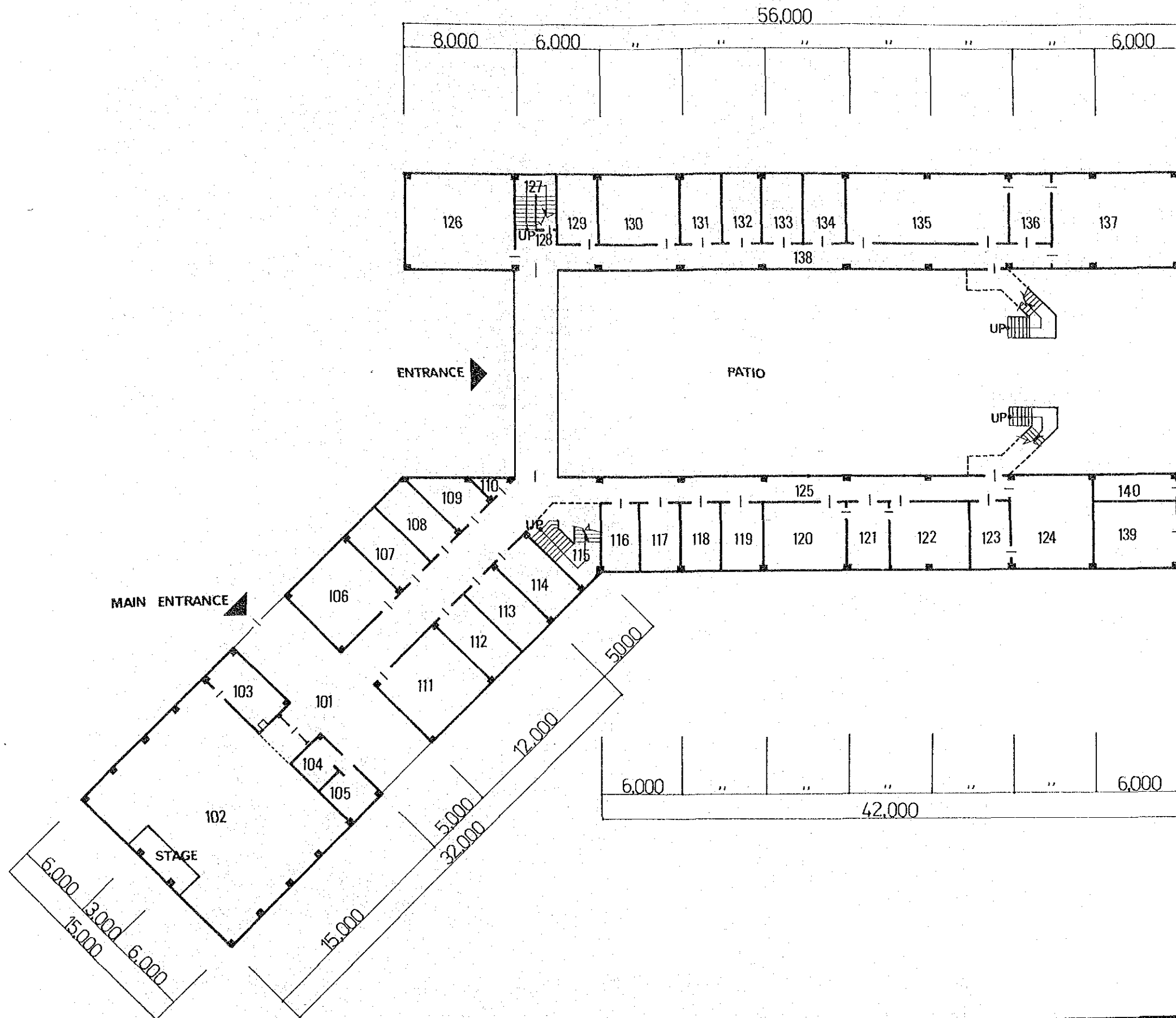
PATIO

SERVICE ENTRANCE

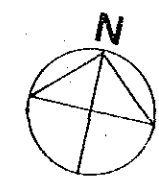


SITE PLAN
S=1/500

SITE PLAN

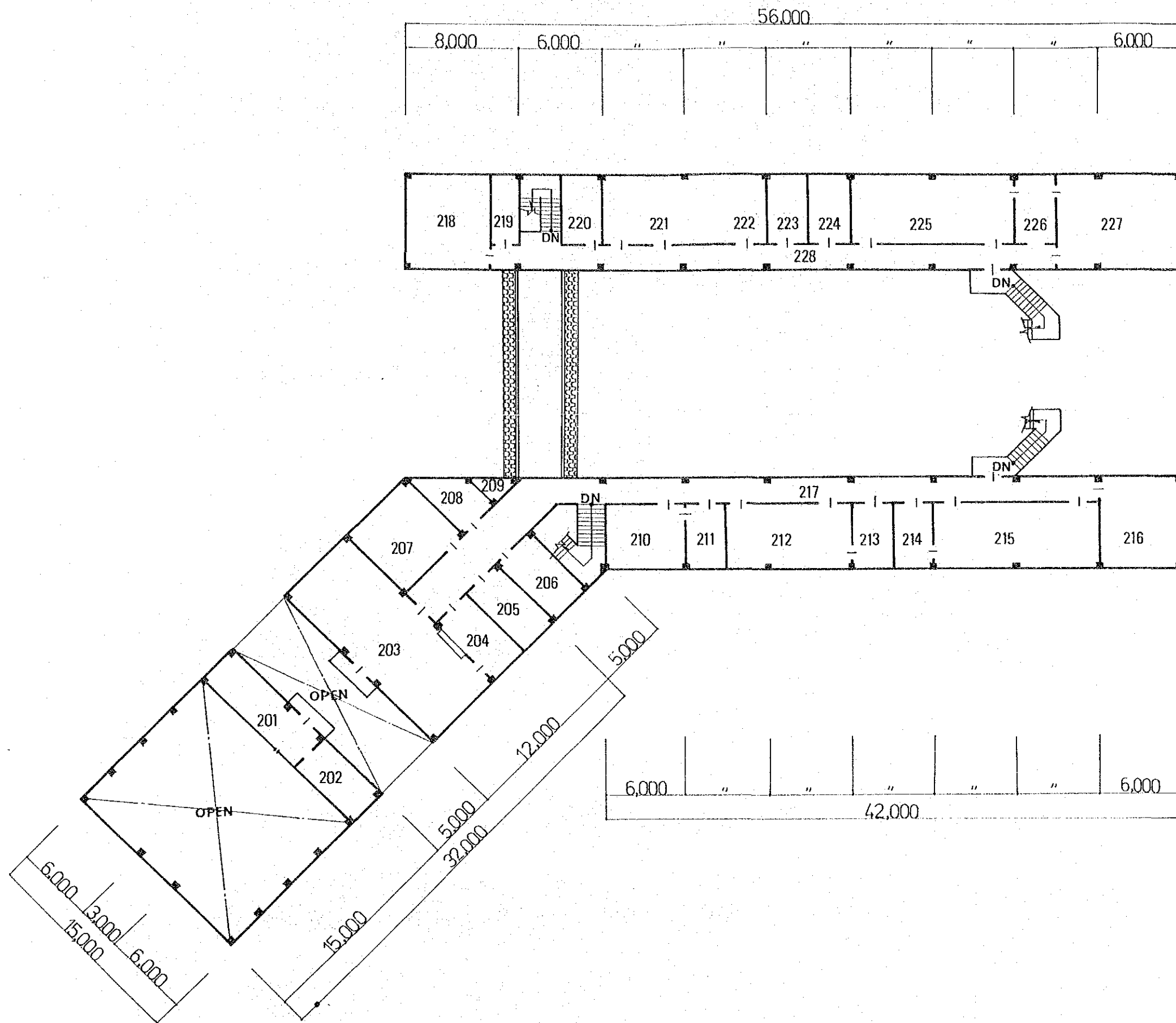


NO	LOCATION
101	ENTRANCE HALL
102	AUDITORIUM
103	STORE
104	TOILET (W)
105	TOILET (M)
106	OFFICE
107	DIRECTOR ROOM
108	HEAD OFFICER ROOM
109	DRAWING ROOM
110	TOILET
111	CONFERENCE ROOM
112	ANTEROOM
113	SANITATION ROOM
114	TOILET
115	STAIR CASE
116	ANTEROOM
117	ANTEROOM
118	ANTEROOM
119	STORE
120	X-RAY ROOM
121	DARK ROOM
122	X-RAY ROOM
123	PREPARATION ROOM
124	CLASS ROOM
125	CORRIDOR
126	CONFERENCE ROOM
127	STAIR CASE
128	STORE
129	TOILET
130	ANTEROOM
131	ANTEROOM
132	ANTEROOM
133	ANTEROOM
134	STORE
135	PRACTICE ROOM
136	PREPARATION ROOM
137	CLASS ROOM
138	CORRIDOR
139	ELECTRIC ROOM
140	MECHANICAL ROOM



GROUND FLOOR PLAN
S=1/300

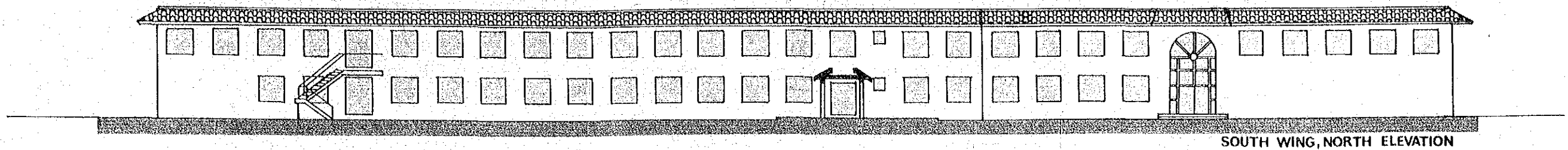
SCHOOL



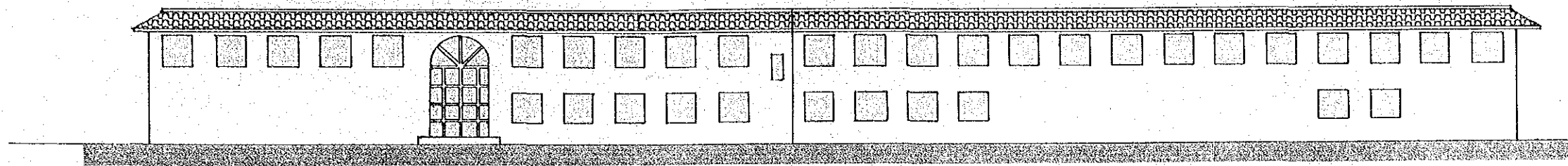
NO.	LOCATION
201	PROJECTION BOOTH
202	STORE
203	LIBRARY
204	STACKS
205	STORE
206	TOILET
207	ANTEROOM
208	ANTEROOM
209	TOILET
210	PHYSIOLOGY
211	PREPARATION ROOM
212	PRACTICE ROOM
213	PREPARATION ROOM
214	PREPARATION ROOM
215	PRACTICE ROOM
216	CLASS ROOM
217	CORRIDOR
218	CLASS ROOM
219	STORE
220	TOILET
221	PRACTICE ROOM
222	PREPARATION CORNER
223	STORE
224	STORE
225	PRACTICE ROOM
226	PREPARATION ROOM
227	CLASS ROOM
228	CORRIDOR

1ST. FLOOR PLAN
S=1/300

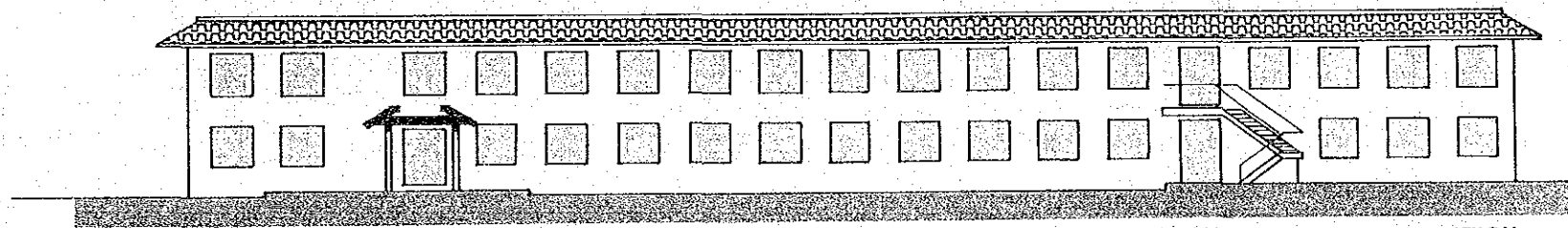
SCHOOL



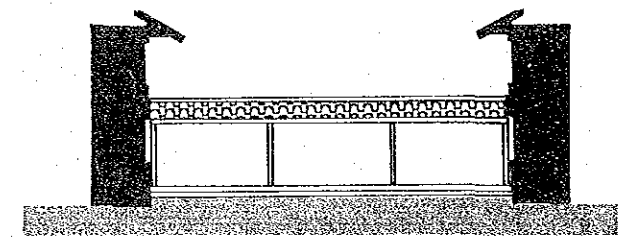
SOUTH WING, NORTH ELEVATION



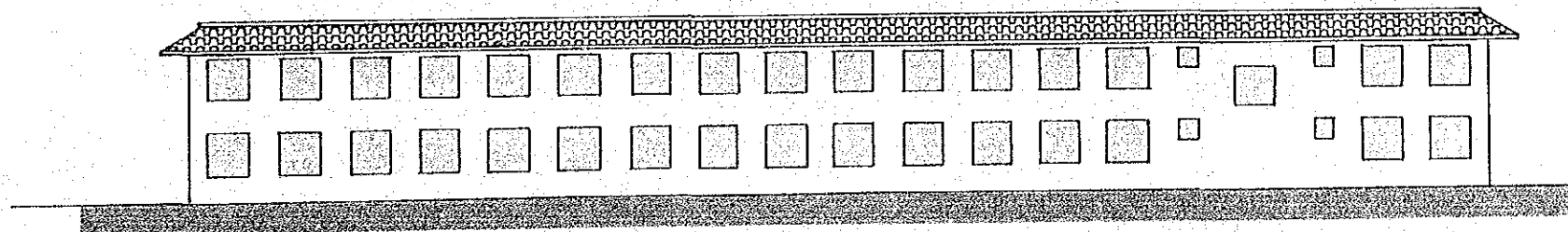
SOUTH WING, SOUTH ELEVATION



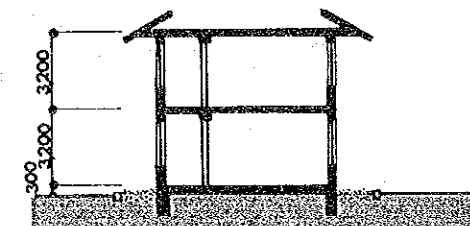
NORTH WING, SOUTH ELEVATION



ENTRANCE ELEVATION



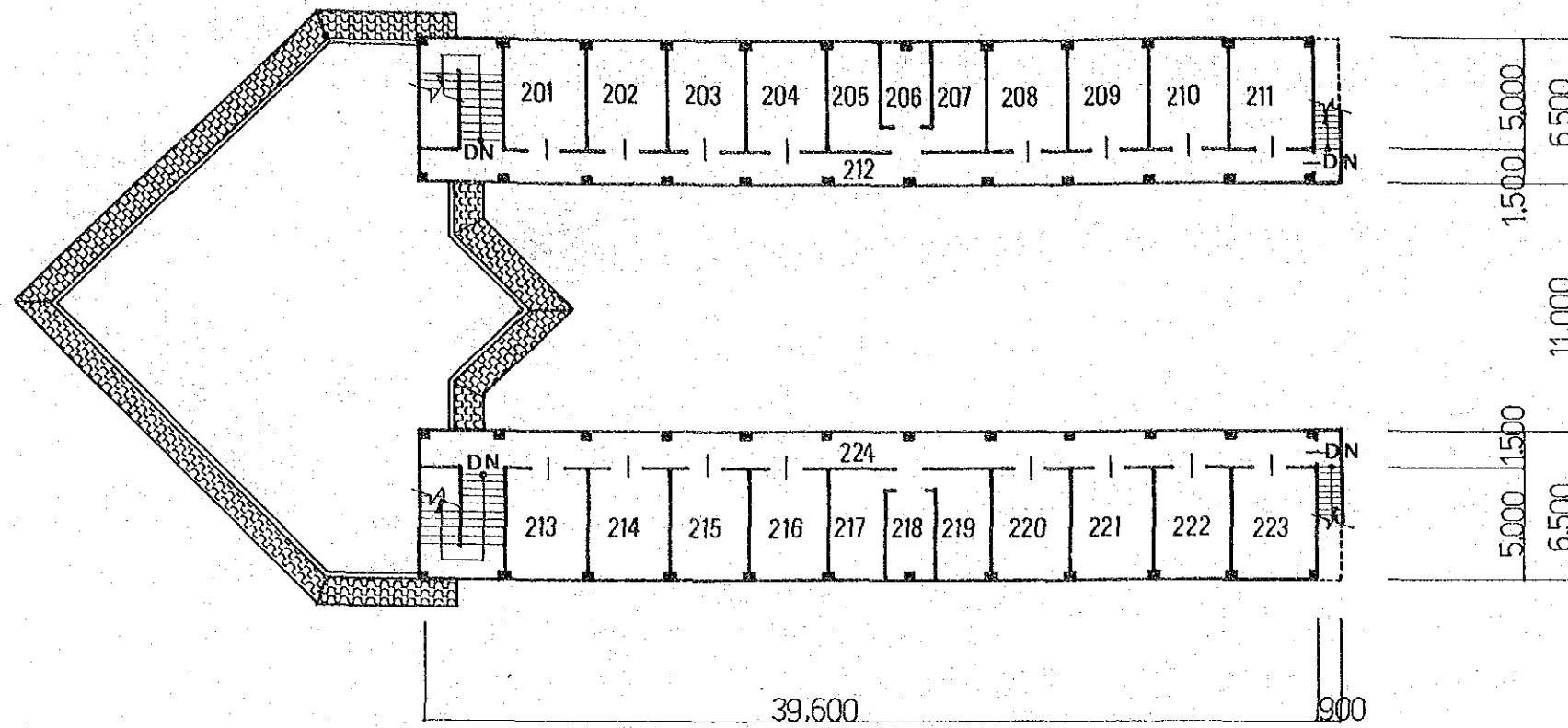
NORTH WING, NORTH ELEVATION



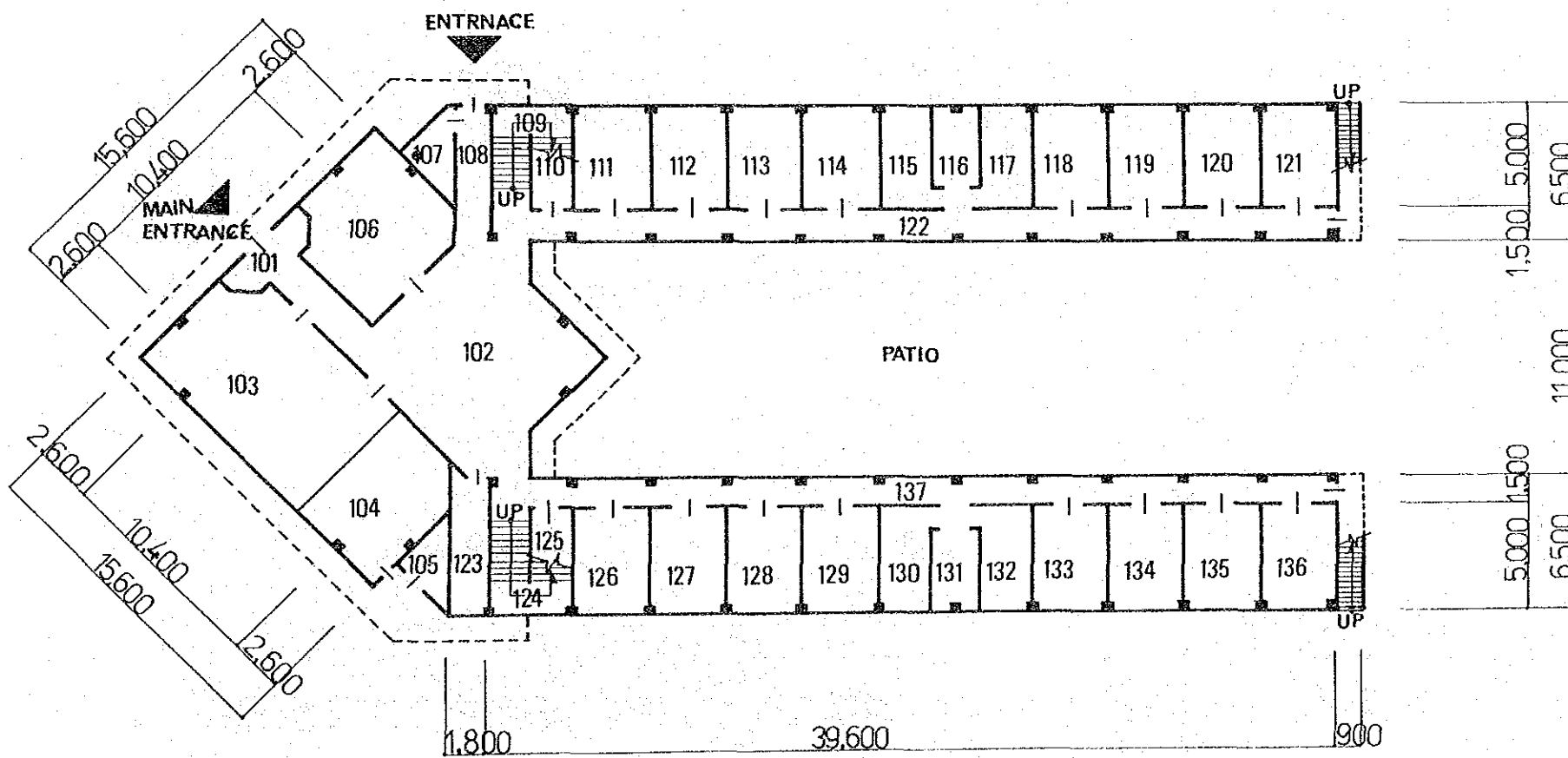
SECTION

ELEVATION
SECTION
S=1/300

SCHOOL



1ST. FLOOR PLAN S=1/300



GROUND FLOOR PLAN S=1/300

GROUND FLOOR PLAN

NO.	LOCATION
101	ENTRANCE (1)
102	LOUNGE
103	DINING ROOM
104	KITCHEN
105	KITCHEN OFFICE
106	READING ROOM
107	OFFICE
108	ENTRANCE (2)
109	STAIR CASE
110	STORE
111	SPARE ROOM
112	BED ROOM
113	BED ROOM
114	BED ROOM
115	BED ROOM
116	BED ROOM
117	BED ROOM
118	BED ROOM
119	BED ROOM
120	BED ROOM
121	BED ROOM
122	CORRIDOR
123	STORE
124	STAIR CASE
125	STORE
126	SPARE ROOM
127	BED ROOM
128	BED ROOM
129	BED ROOM
130	TOILET
131	WASHING ROOM
132	SHOWER ROOM
133	BED ROOM
134	BED ROOM
135	BED ROOM
136	BED ROOM
137	CORRIDOR

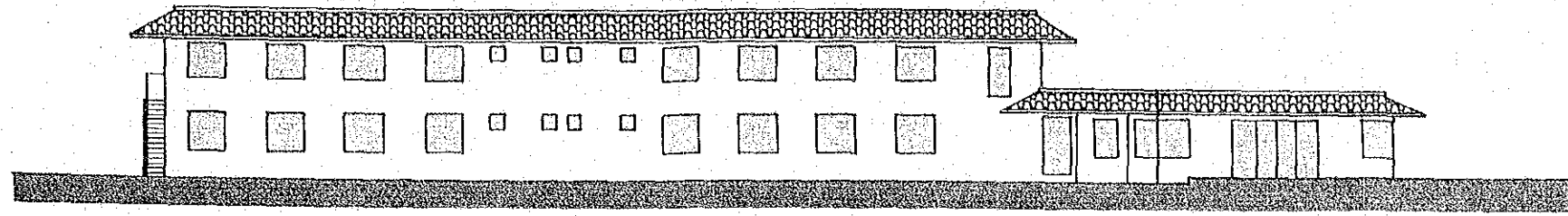
1ST. FLOOR PLAN

NO.	LOCATION
201	BED ROOM
202	BED ROOM
203	BED ROOM
204	BED ROOM
205	TOILET
206	WASHING ROOM
207	SHOWER ROOM
208	BED ROOM
209	BED ROOM
210	BED ROOM
211	BED ROOM
212	CORRIDOR
213	BED ROOM
214	BED ROOM
215	BED ROOM
216	BED ROOM
217	TOILET
218	WASHING ROOM
219	SHOWER ROOM
220	BED ROOM
221	BED ROOM
222	BED ROOM
223	BED ROOM
224	CORRIDOR

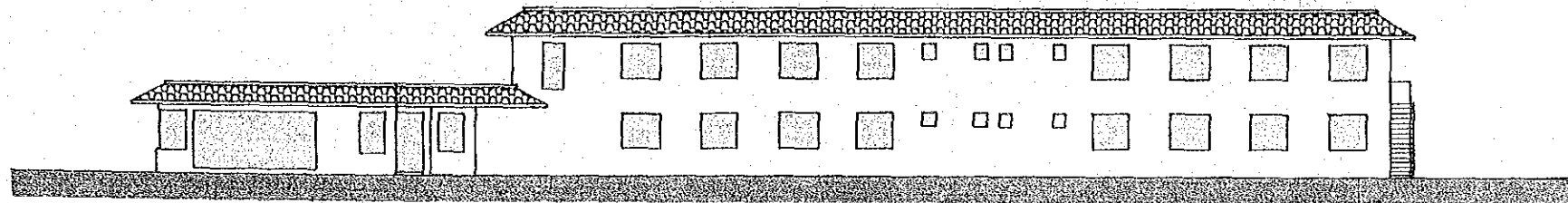


PLAN
S=1/300

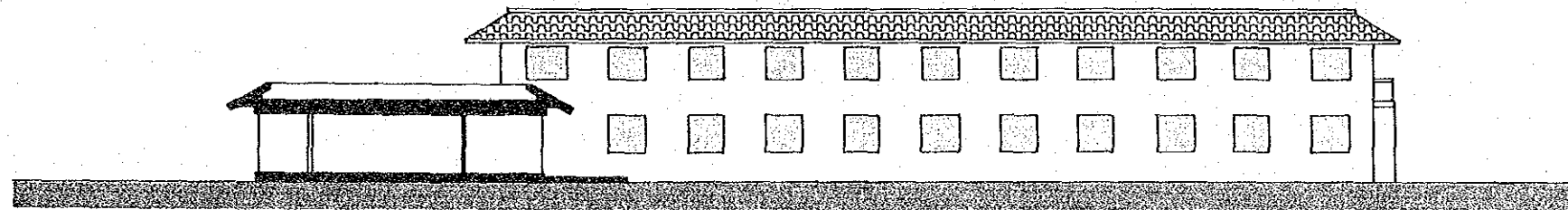
DORMITORY



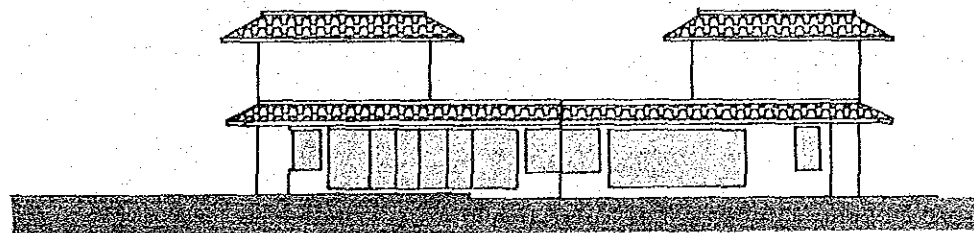
SOUTH ELEVATION



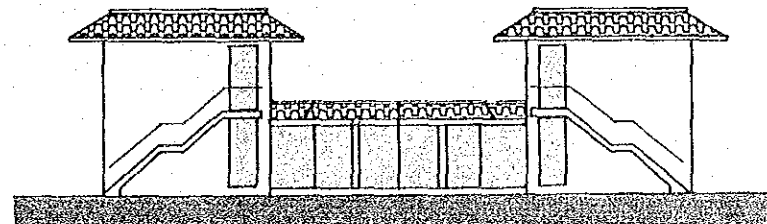
NORTH ELEVATION



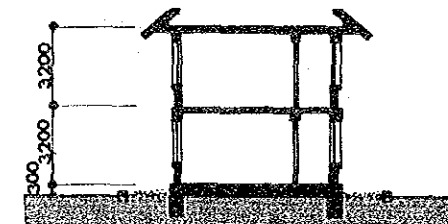
NORTH WING, SOUTH ELEVATION



WEST ELEVATION



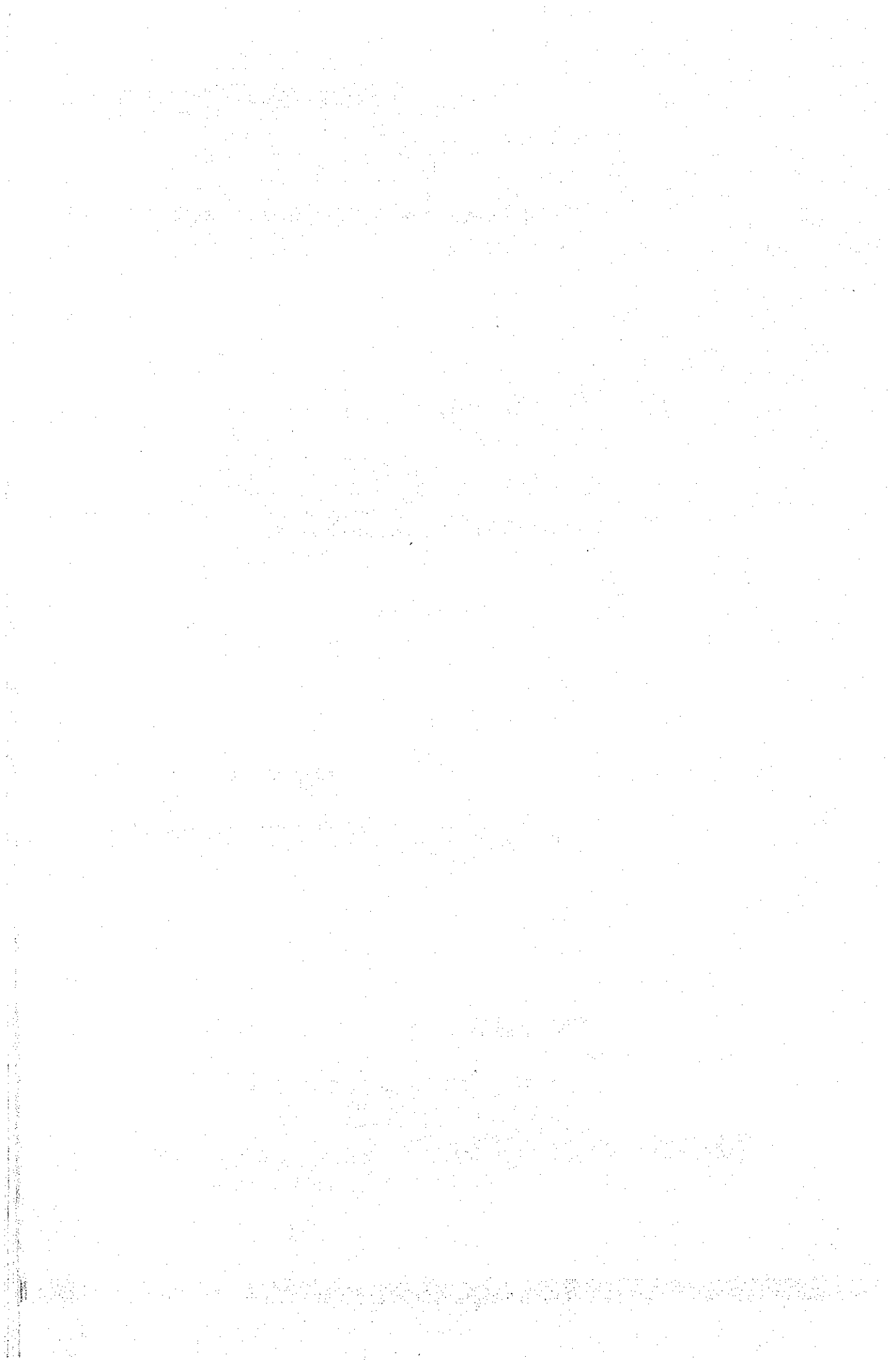
EAST ELEVATION



SECTION

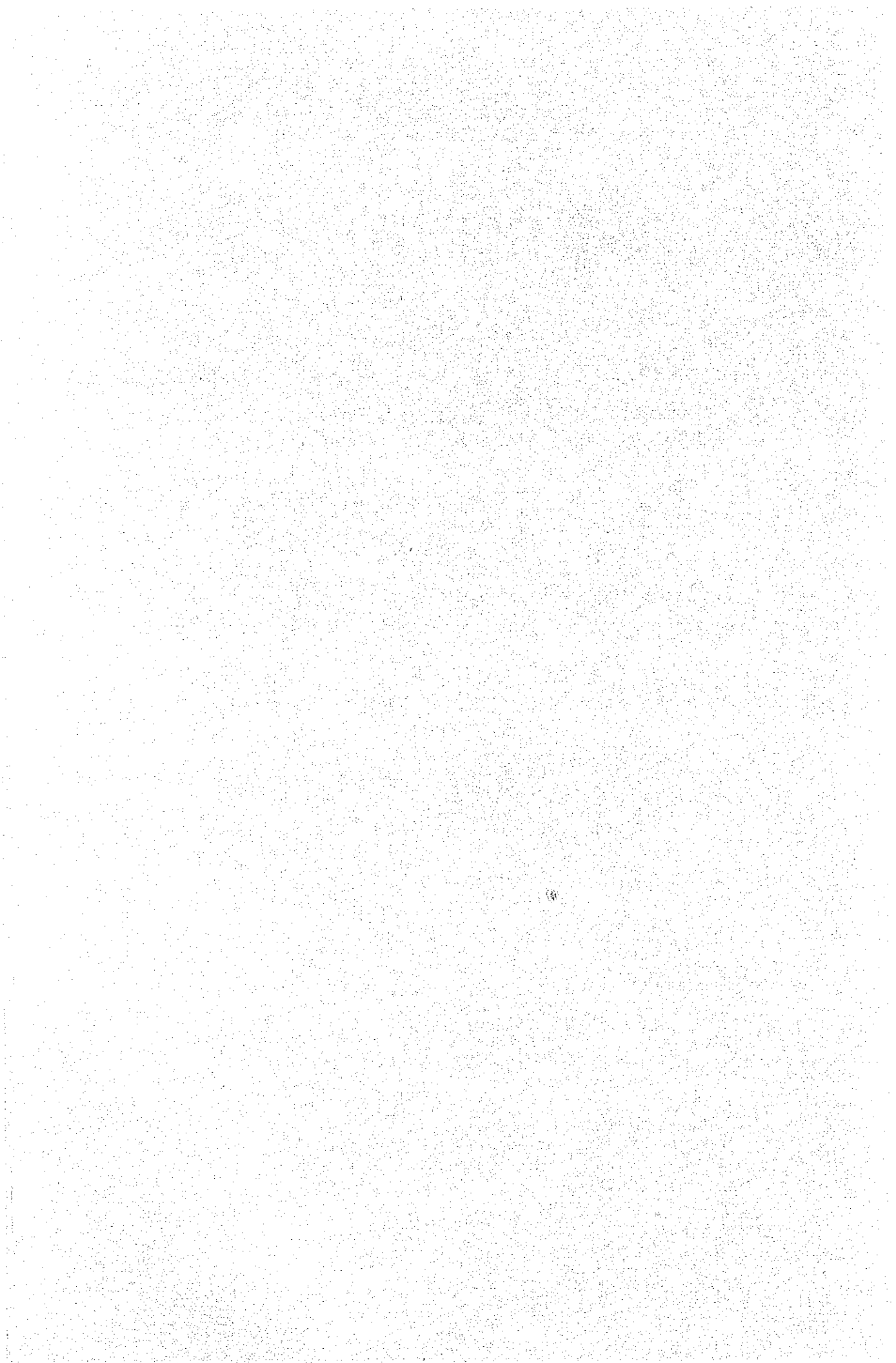
ELEVATION
SECTION
S = 1/300

DORMITORY



APPENDIX

- I BASIC DESIGN SURVEY TEAM
 - I-1 Minutes
 - I-2 Daily report
- II CONFIRMATION TEAM
 - II-1 Agreement
 - II-2 Daily report



I. BASIC DESIGN SURVEY TEAM

I-1 MINUTES



MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

Cite N°

MINUTES OF THE DISCUSSIONS

ON

ESCUELA NACIONAL DE SALUD PUBLICA

In response to the Government of the Republic of Bolivia for technical assistance of the Basic Design Study on Escuela Nacional de Salud Pública in the Republic of Bolivia, the Government of Japan has sent a survey team headed by Dr. Shozo Tada, Assistant Professor of the School of Medicine, the Toho University, to the Republic of Bolivia to carry out a basic design study from April 15 to May 5, 1980.

The Team has conducted the field survey and held a series of discussions and exchanged views with officials of the Government of the Republic of Bolivia on the construction project of the Escuela Nacional de Salud Pública in Cochabamba (Aniceto Arze Av., 243, Mururina).

As a result of the survey and the discussions, the Japanese Survey Team and the Bolivian Ministry of Public Health agreed to complete the Basic Design Study Report and to recommend their own Government concerned to take the necessary measures to implement the conclusions on the basis of the Minutes of the discussions as per attached herewith in separate papers.

Dr. Hugo Palazzi
MINISTRO DE PREVISION SOCIAL
Y SALUD PUBLICA

Dr. Shozo Tada
Leader of the Japanese
Survey Team on ESCUELA
NACIONAL DE SALUD PU-
BLICA.

May 2nd, 1980
La Paz, Bolivia.



MINUTES OF DISCUSSIONS

I GENERAL

1. The objectives of ESCUELA NACIONAL DE SALUD PUBLICA shall be established 5 courses, such as,
 - (1) Practical nurse,
 - (2) Clinical technologist,
 - (3) X-ray technician,
 - (4) Healthy and sanitary technologist, and
 - (5) Nutritional technologist,so as to improve and foster practical techniques of medicine as part of her medical service development programmes in the Republic of Bolivia.
2. ESCUELA NACIONAL DE SALUD PUBLICA shall belong to the Ministry of Health and welfare.
3. The escuela nacional shall be established in Cochabamba, Bolivia, as per attached Annex I.
4. The descriptions of the escuela nacional is attached to Annex II.

II. MEASURES TO BE TAKEN BY THE GOVERNMENT OF JAPAN

The Government of Japan shall taken necessary measures to provide such buildings and equipment as listed in Annex III.

Provided that the draft and the final reports on the Basic Design Study shall be presented to the Republic of Bolivia as shown in the following; (a) Draft Report: By the end of June 1980. (b) Final Report: By the end of August 1980.

III. MEASURES TO BE TAKEN BY THE GOVERNMENT OF BOLIVIA.

1. A geo - technical investigation for the project site,
 - (a) site measuring, (b) boring tests (ANNEX III-4), &
 - (c) topographic survey, and its preparation for a final report upon the findings;they shall be completed until the end of June 1980.

Handwritten initials: G.S.T.



Cite N°.....

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

- 3 -

2. Site preparation:
It shall be completed until the end of December 1980.
3. Utility service;
 - a) Electric power supply to the site on a temporary basis during the period of construction and to the main electric pannel of the forthcoming escuela nacional.
 - b) City water supply to the site on a temporary basis during the period of construction and to the main water guage of the submain branch (2") lead to the forth-coming escuela nacional.
 - c) Telephone wiring to the site on a temporary basis during the period of construction and to the M.D.F. of the forth coming escuela nacional.
4. Site work, i.e. pavement, planting, fence, gate, gate office; etc.
5. Furnishing except those which are of educational use
6. Others.
 - a) To ensure prompt unloading and customs clearance of imported materials and equipament for the scheduled escuela nacional and also to facilitate their internal transportation in the Republic of Bolivia.
 - b) To exempt Japanese nationals concered from customs duties, internal texas and charges which may be imposed in the Republic of Bolivia on the occasion of the supply of goods and services for the construction of the scheduled escuela nacional.
 - c) To provide and authorize necessary permissions, licenses and other authorizations required for the construction of the scheduled escuela nacional.
 - d) To allocate the fund necessary for the operation and maintenance of the scheduled escuela nacional.

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That's all



Cite N°.....

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

ANNEX I.

Based on the actual survey at the candidate construction site prepared by the Government of Bolivia on April 17, 1980, the survey team concluded that the candidate project site was not suitable for the construction of the Escuela Nacional de Salud Pública in La Paz due to the following reasons; (1) Area: Only 1550 M², (2) Land owner: Ministry of Public Health, (3) Purpose: Store house, (4) Present state: Mostly flat, but partly two storied building covered in the area of 1000M², (5) Distance to the hospital: 30 minutes on foot, and Team's conclusion: Not suitable.

At the conference held at the Ministry of Public Health on April 18, Minister of Public Health strongly requested the survey team to construct ESCUELA NACIONAL DE SALUD PUBLICA in Cochabamba, Bolivia showing a criteria*(1) of selection for the escuela nacional including ten items, which indicated the best candidate construction site to be in Cochabamba out of 6 cities throughout the country.

Corresponding to the request, the survey team surveyed two candidate sites in Cochabamba and made a site comparison table *(2) for the construction for thorough examinations, and decided to select SITE A, Aniceto Arze Av., 243, Muyurina, Cochabamba in front of the Hospital Viedma in Cochabamba, the Republic of Bolivia.

* (1) Criterios De Selección Preliminar para la Ubicación de La "ESCUELA DE SALUD" Proyecto "J.I.C.A."

* (2) Site Comparison Table for the Construction of "ESCUELA NACIONAL DE SALUD PUBLICA."

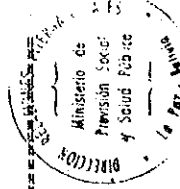
Q
A.T.

CRITERIOS DE SELECCION PRELIMINAR PARA LA
UBICACION DE LA "ESCUELA DE SALUD"
PROYECTO "J.I.C.A"

LA PAZ ' CHUQUISACA ' STA. CRUZ ' COCHABAMBA ' TARIJA ' SENI

1.- Geoplítico	..	.	...	...
2.- Accesibilidad	...	"	...	..
3.- Comunicaciones	...	"	...	..
4.- Disponibilidad de Terreno.	...	...	...	...
5.- Vinculación con la Facultad de Ciencias de la Salud.	...	...	...	"
6.- Campo de práctica	...	"	...	..
7.- Recursos Humanos	...	..	...	"
8.- Densidad Demográfica	"
9.- Costo de Vida	"
10.- Condiciones Ecológicas

24 22 12 30 21 6



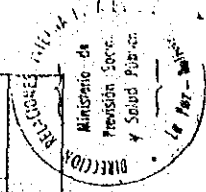
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SITE COMPARISON TABLE

By The Japanese Survey Team

ITEM	SITE A (Close to HOSPITAL)	EVALUATION	SITE B (Close to AV. SACABA)	EVALUATION
A. Land owner	Owned by M.S.P.	A	Owned by M.S.P.	A
B. Distance from Hospital	Close	A	Far	D
C. Distance from University (Medical school)	Close	A	Far	B
D. Distance from City Center	Near	B	Far	D
E. Site area	11,500m ²	B	11,700m ²	B
F. Access main road	Close	A	Close	A
G. Site preparation (Obstacles at site)	6 buildings (1,800m ²)	C	Nil	A
H. Soil condition	Allowable capacity of abt. 10t/m ²	B	Allowable capacity of abt. 10t/m ²	B
I. Electric power supply	Available	A	New wiring works required	D
J. City water supply	8" pipe in placed in main road	A	Required to dig a well	D
K. Public drainage	8" pipe in placed in main road	A	Required to install a septic tank.	D
L. Fuel	To use butane gas	B	To use butane gas	B
M. Telephone	Available	A	New wiring works required	D
Total Judgment	Suitable		Inferior than A	

A: Excellent B: Good C: Adequate D: Poor E: Failure





ANNEX II DESCRIPTION OF THE ESCUELA NACIONAL DE SALUD
PUBLICA.

1. Training course and number of students.

A. Practical nurse	40 persons/class
B. Clinical technologist	20 persons/class
C. X-ray technician	20 persons/class
D. Healthy and sanitary technician	40 persons/class
E. Nutritional technologist	20 persons/class

Each course accomodates two classes which are separately lectured twice a day.

2. Training period

	In Escuela	In Clinico
--	------------	------------

A. Practical nurse	0.5 year	0.5 year
B. Clinical technologist	1.0 year	1.0 year
C. X-ray technician	1.0 year	1.0 year
D. Healthy and sanitary technician	1.0 year	---
E. Nutritional technologist	1.0 year	---

3. Required staff of the escuela.

(1) Staff for education

a. Director	1 person
b. Teacher in charge	5 persons
c. Teacher in full time	7-8 persons
d. Teacher in additional post.	
1) Basic subject	8 persons (in common)
2) Special subject.	

1) Fundamental medicine	6-7 persons (in common)
ii) Clinical medicine	36 persons

(2) Staff for administration

a. Head official	1 person
b. Charged official	5 persons
c. Clerk	5 persons



4. Curriculum time of each course shall be recommended as shown in Table 1.

Table 1.

Curriculum time Course	Primary subject hour	Sp. subject hour	Total		Clinical practice hours	GRand Total	
			hour	week		hours	weeks
A. Practical nurse	305	320	625	20.8	625	1250	41.6
B. Cl. Tech.	435	815	1250	41.6	1250	2500	83.3
C. X-ray tech	360	795	1155	38.5	900	2055	68.5
D. H. & S. tech	305	940	1245	41.5		1245	41.5
E. N. tech.	250	1000	1250	41.6		1250	41.6

cf. * 30 hours/week

(Handwritten signature)
D.T.



5. Curriculum for Training Courses.

A. Practical Nurse

I. Primary Subject

1. Cultural and social science
2. Natural science
 - 1) Mathematics
 - 2) Chemistry
 - 3) Biology
3. Foreign language
4. Health education and physical education
5. Anatomy and physiology
6. Bacteriology and disinfection
7. Individual hygiene
8. Alimentotherapy
9. Phamacological introduction
10. Related law and regulation of hygiene

II. General nursing

1. History and moral nursing
2. Principle and practice of nursing
3. Internal disease and its nursing
(contained infectious disease)
4. Surgical disease and its nursing (contained orthopedics)
5. Pediatrics and its nursing
(contained health guidance of children)
6. Obstetrics and gynecological disease and their nursing
(contained newborn baby)
7. Psychiatrical disease and its nursing
8. Disease of ophthalmology, dentistry and
otorhinolaryngology and their nursing
9. Dermatological and urogical disease
(contained venereal disease)
10. Physical therapeutics

II-3



Cite N°.....

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

III. Clinical practice.

Service in Clinical Training in Ward and Others	Service in Outpatient Clinics
Internal medicine (contained infectious disease).	Internal medicine (contained infectious disease).
Surgery	Surgery
Pediatrics	Pediatrics
Obstetrics and gynecology	Obstetrics and gynecology
Operation room	Ophthalmology, dentistry and otorhinolaryngology
Cooking room of special diet	Dermatology and urology

B. Clinical Technologist

I. Primary Subject

1. Cultural science
2. Social science
3. Natural science
 - 1) Mathematics
 - 2) Physics
 - 3) Chemistry
 - 4) Biology
 - 5) General science of information
4. Foreign language.
5. Health education and physical education

II. Special Subject

1. General medicine
2. General public hygiene
3. Introduction of clinical pathology
4. Introduction of clinical examination I
(Treatment of specimens)
5. Introduction of clinical examination II
(Treatment of patient).

II - 4.



6. Anatomy and histology
7. Basic physiology
8. Clinical physiology
9. Pathology
10. Biochemistry
11. Clinical chemistry
12. Haematology
13. Microbiology
14. Serology
15. Medical zoology
16. Experimental zoology
17. General medical electronics
18. Related law and regulation

C. X-ray Technologist

I. Primary Subject

1. Cultural science
2. Social science
3. Natural science
 - 1) Mathematics
 - 2) Physics
 - 3) Chemistry
 - 4) Biology
4. Foreign language
5. Health education and physical education

II. Special Subject

1. General medicine
2. Radioactive biology
3. Anatomy
4. Physiology
5. Biochemistry
6. Pathology
7. Hyginics and public hygiene
8. Radioactive physics
9. Electrical engineering
10. Electronics



Cite Nº.....

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

11. Mechanical engineering
12. Radioactive equipment
13. X-ray photograph
14. Technique of X-ray photographing
15. Radioactive measurement
16. Technique of radio-therapy
17. Technique of radioactive control
18. Related law and regulation

D. Healthy and Sanitary Technologist

I. Primary subject

1. Cultural and social science
2. Natural science
 - 1) Mathematics
 - 2) Chemistry
 - 3) Biology
3. Foreign language
4. Health education and physical education
5. Anatomy and physiology
6. Microbiology and disinfection
7. Individual hygiene
8. Alimentotherapy
9. Pharmacological introduction
10. Related law and regulation of hygiene

II. Especial subject.

1. Gneral nursing.

- 1) History and moral of nursing
- 2) Principle and practice nursing
- 3) Internal disease and its nursing
(contained infectious disease)
- 4) Surgical disease and its nursing
(contained orthopedics)
- 5) Pediatrics and its nursing
(contained health guidance of children)
- 6) Obstetrics and gynecological desease and their
nursing (contained newborn baby)

II- 6



Cite Nº.....

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

- 7) Psychiatrical disease and its nursing
- 8) Disease of ophthalmology, dentistry and otorhinolaryngology and their nursing
- 9) Dermatological and urological disease (contained venereal disease)
- 10) Physical therapeutics

- 2. Nusing of public health
- 3. Statistics of health
- 4. Epidemiology
- 5. Control of health
- 6. System of social welfare and social guaranty
- 7. Introduction of health of mather and infantile
- 8. Politics of public health

III. Clinical practice

Service in Clinical Training	Service in Outpatient
Internal medicine (contained infectious disease)	Internal medicine (contained infectious disease)
Surgery	Surgery
Pediatrics	Pediatrics
Obstetrics and gynecology	Obstetrics and gynecology
Operation room	Ophthalmology, dentistry and otorhinolaryngology
Cooking room of special diet	Dermatology and urology

II - 7



Cite N°

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

E. Nutritional Technologist.

I. Primary subject

1. Cultural science
2. Social science
3. Natural science
 - 1) Chemistry
 - 2) Biology
4. Foreign language
5. Health education and physical education

II. Special subject

1. General nutrientionology
2. Nutritional physiology
3. Nutritional biochemistry
4. Pathological nutrientionology
5. Science of food
6. Hygiene of foof
7. Public hygiene
8. Method of cooking
9. Nutritional orientation

S.T.

II - 8



Cite N°.....

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

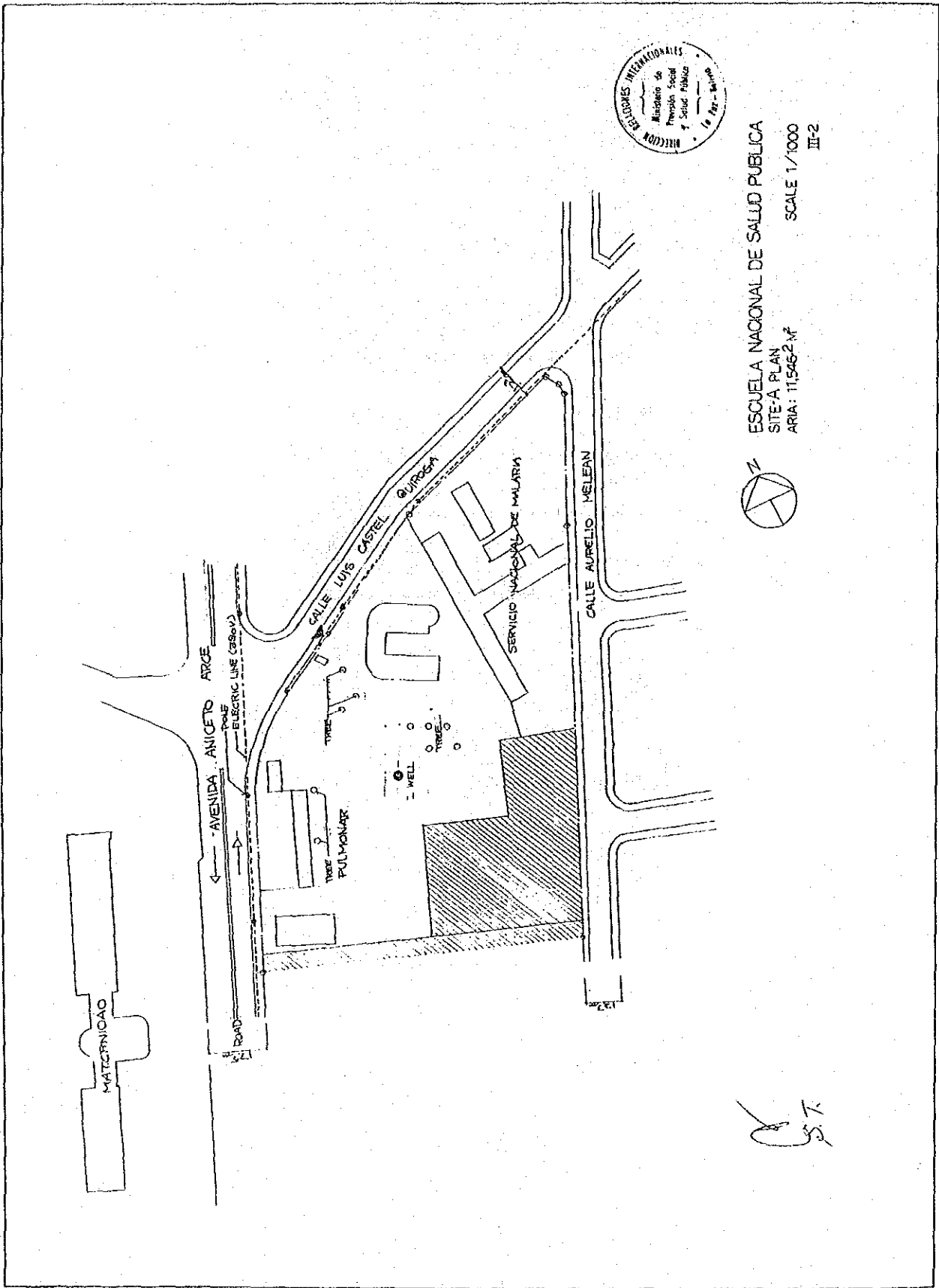
ANNEX III

1. Consultant services
 Detail design and supervision

2. Buildings
 - A. School building
 - B. Dominotry
 (See attached drawings.)

3. Equipment
 (See Attached "List of Equipment").

III - 1

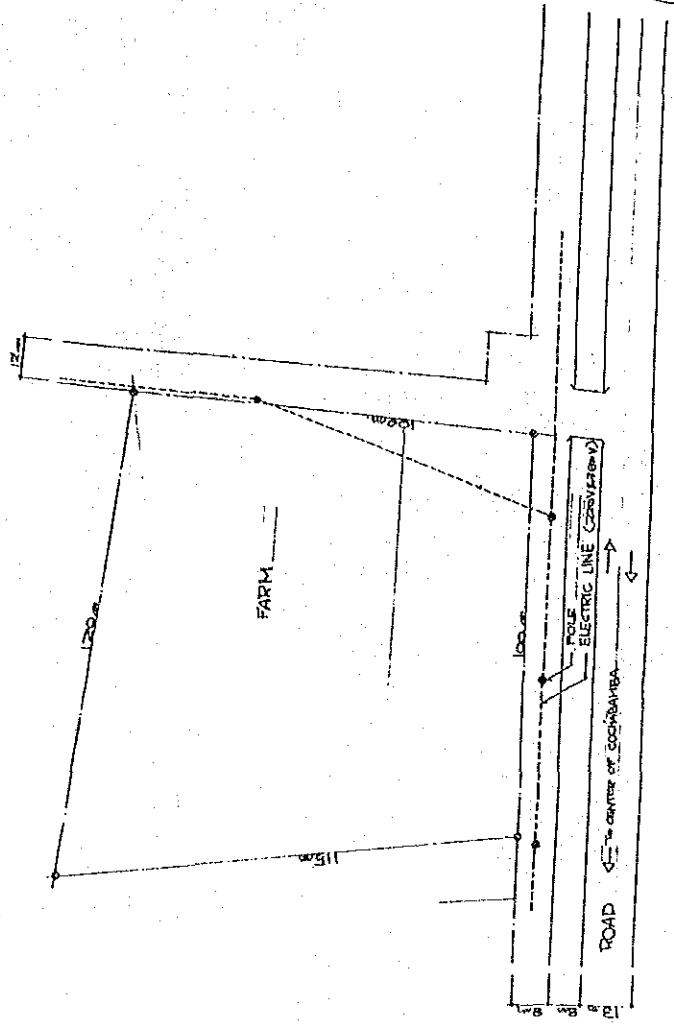
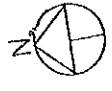


ESCUELA NACIONAL DE SALUD PUBLICA
 SITE-A PLAN
 AREA: 115462 M²
 SCALE 1/1000
 III-2

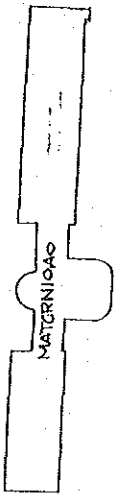
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ESCUELA NACIONAL DE SALUD PÚBLICA
SITE-B, PLAN
AREA: 11723.75 M² SCALE: 1/1000
II-3



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AVENIDA ANICETO ARCE




CALLE LUIS CASTEL GUERRA

POLIGONAL

SERVICIO NACIONAL DE SALUD PUBLICA

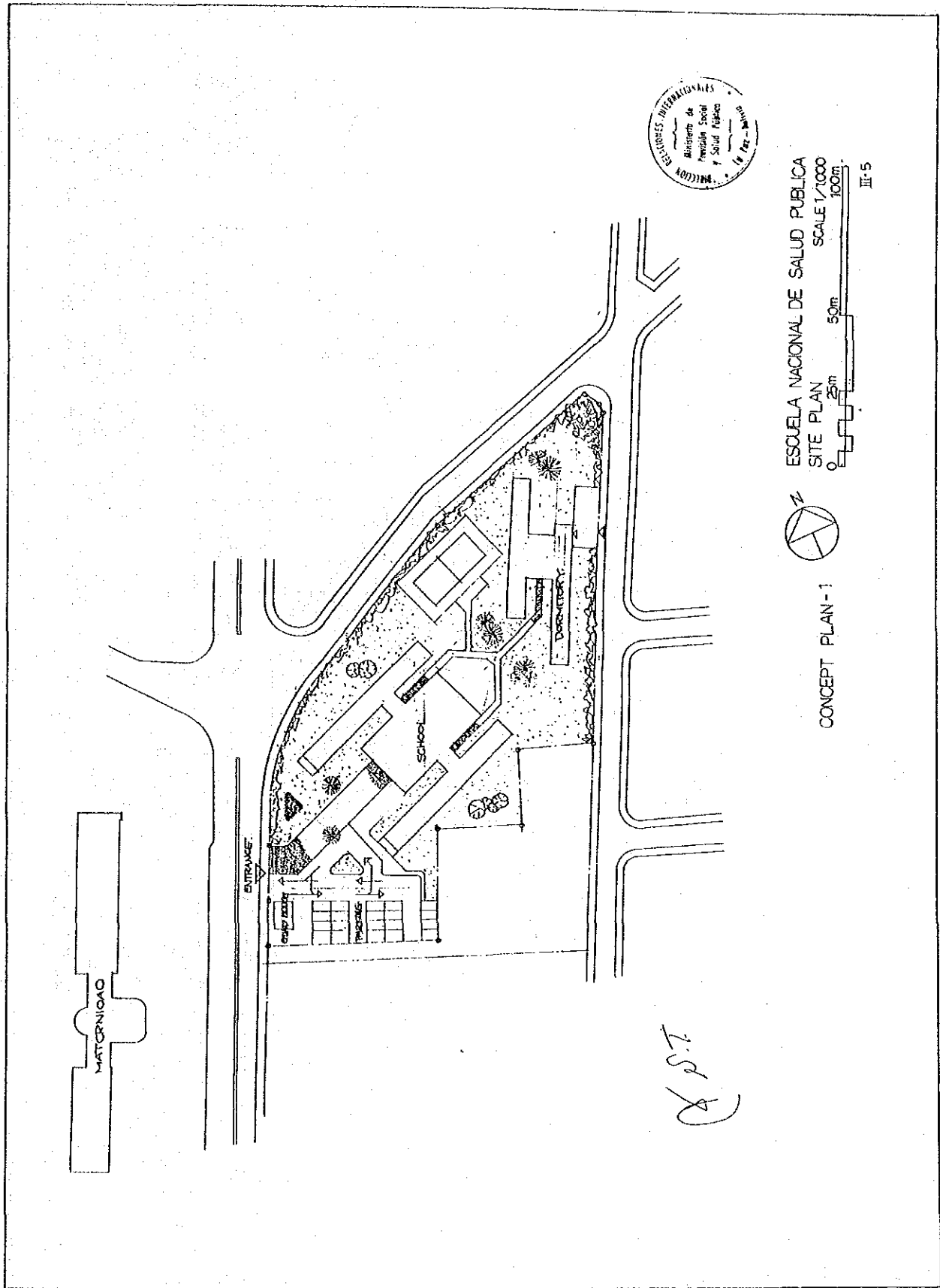
CALLE AURELIO HELAN



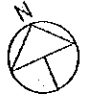
-  SITE
-  DEMOLISHMENT BUILDINGS
-  BORING POINT (3 POINTS)

ESCUELA NACIONAL DE SALUD PUBLICA
DEMOLISHMENT DRAWING
SCALE 1/1000
III-4

K.S.T.



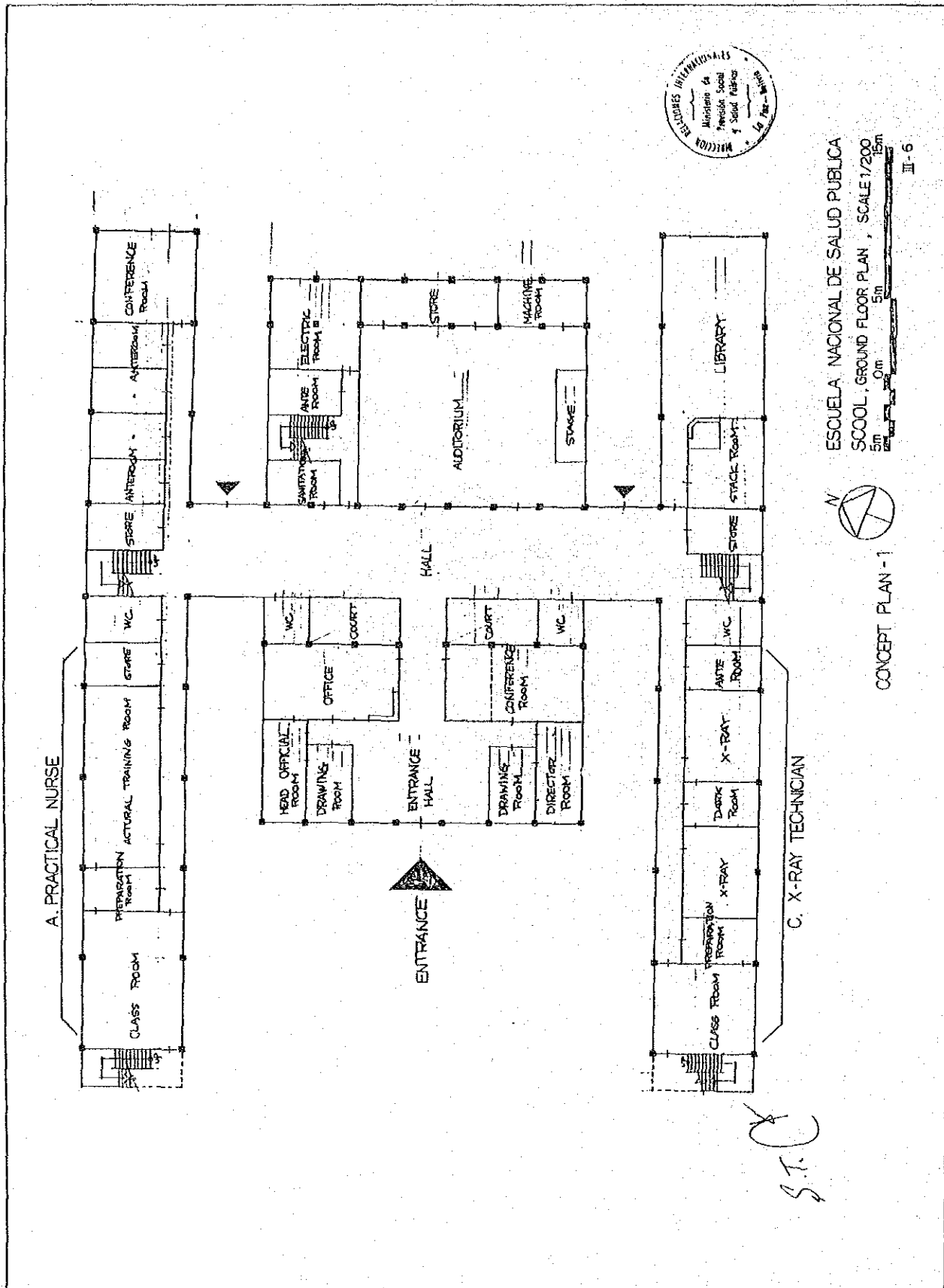
ESUELA NACIONAL DE SALUD PUBLICA
 SITE PLAN
 SCALE 1/1000
 0 25m 50m 100m



CONCEPT PLAN - 1

III-5

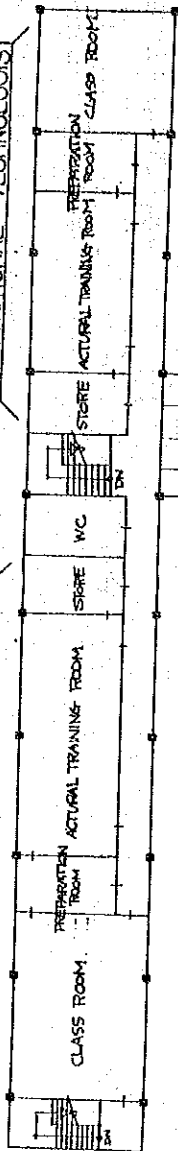
L.S.P.



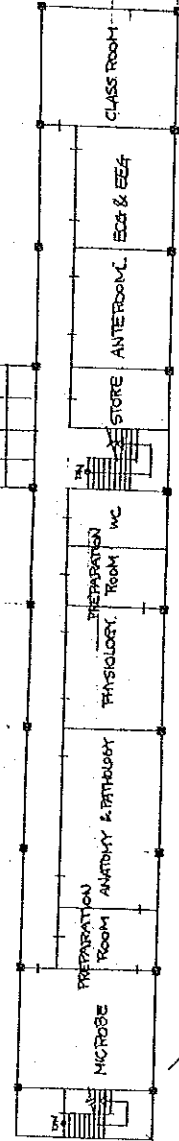
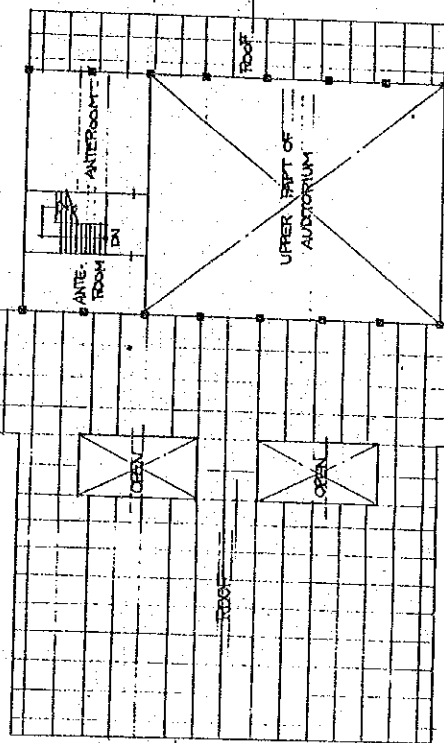
ESCUELA NACIONAL DE SALUD PUBLICA
 SCHOOL GROUND FLOOR PLAN, SCALE 1/200
 5m 0m 15m
 CONCEPT PLAN - 1
 III-6

S.T.C.

D. HEALTH AND SANITARY TECHNOLOGIST



E. NUTRITIONAL TECHNOLOGIST



B. CLINICAL TECHNOLOGIST



ESCUELA NACIONAL DE SALUD PUBLICA
 SCHOOL, 1ST. FLOOR PLAN, SCALE 1/200
 5m 0m 5m 15m

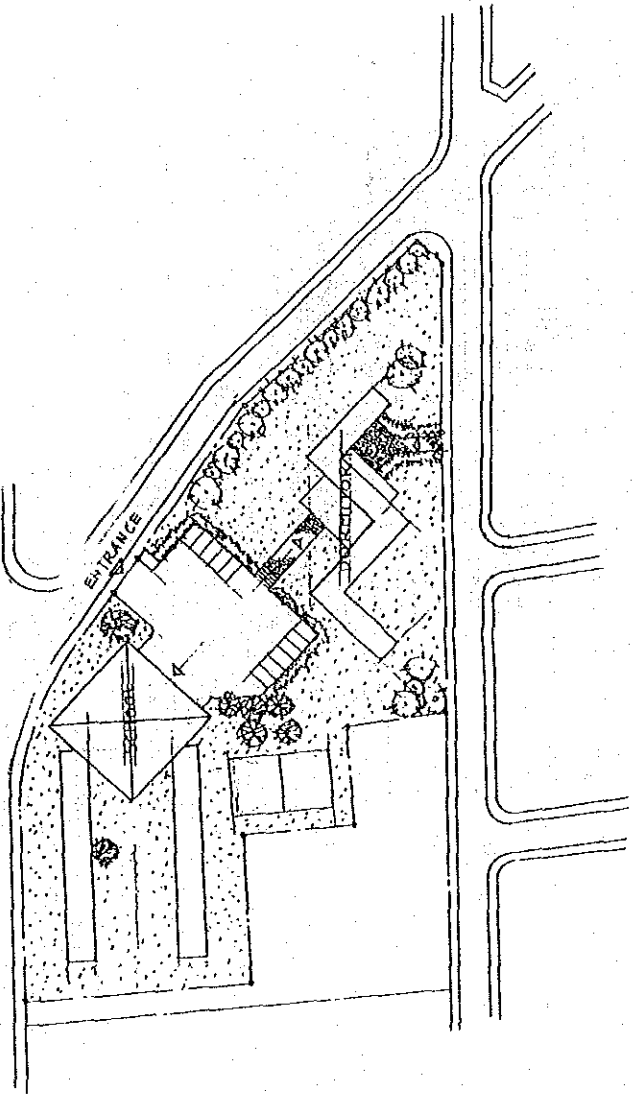


CONCEPT PLAN - 1

IF-7

J.F.C.

ESTACIONADO



ESUELA NACIONAL DE SAUO. PUBLICA
SITE PLAN



CONCEPT PLAN-2

III-8

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LIST OF EQUIPMENT

A) Practical Nurse

- 1) Bed
- 2) Bed side table
- 3) Chair
- 4) Foot stool
- 5) Stand screen
- 6) Mat
- 7) Over bed table
- 8) Rubber sheet
- 9) Model of human body
- 10) Back rest
- 11) Wheel chair
- 12) Walker
- 13) Stretcher
- 14) Restraining material of patient
- 15) Ice bag
- 16) Ice bag hanger
- 17) Hot water bottle
- 18) Water pillow
- 19) Rubber ring
- 20) Bed pan
- 21) Urine bottle
- 22) Urine glass
- 23) Shaving set
- 24) Hair clipper
- 25) Washbowl (large and small)
- 26) Hair washing car
- 27) Bathing model of infant
- 28) Bathing tab for infant and bathing set
- 29) Pitcher
- 30) Laundry bag
- 31) Stethoscope
- 32) Length scale
- 33) Weight scale
- 34) Utensils for infantile diet
- 35) Preventive gown

S.T. (A)



Cite N°

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

- 36) Pus basin (large, small)
- 37) Syringe
- 38) Needle for syringe
- 39) Funnel for gastric irrigation
- 40) Gastric catheter
- 41) Irrigation set
- 42) Irrigation stand
- 43) Rubber tube and catheter
- 44) Glass tube connector
- 45) Enema syringe set
- 46) Stopper
- 47) Hand brush
- 48) Scrubbing brush
- 49) Scissors
- 50) Kocher's forceps
- 51) Pressing forceps
- 52) Anatomic forceps
- 53) Toothed forceps
- 54) Forceps stand
- 55) Bioling bath
- 56) Bandage
- 57) Ferule
- 58) Suction tube
- 59) Suction pump
- 60) Material of compress
- 61) Bucket for filth
- 62) Gauze reservoir
- 63) Basin for eye washing
- 64) Glass washing bottle
- 65) Drop Bottle
- 66) Gauzer jar
- 67) Neblizer
- 68) Model of gastric irrigation
- 69) Aspiration pump
- 70) Flow meter
- 71) Incubator
- 72) Physical examination set

ST. C



Cite N°.....

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

- 73) Tape measure
- 74) Clinical thermometer
- 75) Hand dynamometer
- 76) Back dynamometer
- 77) Respiratometer
- 78) Sphygmomanometer
- 79) Goniometer
- 80) Traube's stethoscope
- 81) Negatoscope
- 82) Proctoscope
- 83) Vaginoscope
- 84) Rhinoscope
- 85) Otoscope

S.T.

III-11



Cite N°

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

B) Clinical technologist

(a) For common use

- 1) Chemical balance
- 2) Direct reading balance
- 3) Roberval's balance
- 4) Table centrifuge
- 5) Hanging centrifuge
- 6) Binocular microscope with crosstable
- 7) Phase-contrast microscope
- 8) Fluorescent microscope and illuminative equipment
- 9) Darkfield microscope
- 10) Stereo-microscope
- 11) Electric refrigerator
- 12) Water bath
- 13) Water purifier
- 14) Autoclave
- 15) Dryheat sterilizer
- 16) Boiling bath
- 17) Pipette washer
- 18) Calculator
- 19) Barometer
- 20) Incubater
- 21) Animal dissection equipment
- 22) Animal fixing case
- 23) Vaccum pump
- 24) Glass-work gas burner
- 25) Glass ware
- 26) Object-glass
- 27) Cover Glass
- 28) Loop
- 29) Alcohol lump

ST (4)

III- 12



Cite Nº.....

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

(b) For special use

- 1) Viscosity measuring apparatus
- 2) Thermal expansion measuring apparatus
- 3) Apparatus of optical experiment
- 4) Photometer
- 5) Hydrometer
- 6) Electric circuit experiment equipment
- 7) Melting point measuring instrument
- 8) Noise measuring equipment
- 9) Dust collector
- 10) Illuminometer
- 11) Urine hydrometer
- 12) Syringe
- 13) Phonocardiograph
- 14) Electrocardiograph
- 15) Spirometer
- 16) Fetal phonocardiograph
- 17) Fetal electrocardiograph
- 18) Electroencephalograph
- 19) Electromyograph
- 20) Microtome
- 21) Frozen section apparatus
- 22) Paraffin oven
- 23) Stretching hot plate
- 24) Automatic microtome knife sharpener
- 25) Densitometer
- 26) Microkijeldahl apparatus
- 27) PH meter
- 28) Spectrophotometer
- 29) Electrophoresis apparatus
- 30) Flame photometer
- 31) Blood cell counting chamber
- 32) Hemoglobinometer
- 33) Erythrocyte sedimentation test instrument
- 34) Sphygmomanometer
- 35) Stethoscope

III-13



Cite N°

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

- 36) Hematocrit centrifuge
- 37) Sterilizer of serum coagurating medium
- 38) Anerobic jar
- 39) Magnetic stirrer
- 40) Roter
- 41) Medical amplifier
- 42) Oscilloscope

(c) Specimen and model

- 1) Model of human body
- 2) Model of skeletal structure
- 3) Model of internal organs of human body
- 4) Histopathological specimen and model
- 5) Specimens of parasitic insect, protozoa and hygiene animals.

S.T.



Cite N°

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

C) X-ray technician

- 1) X-ray apparatus
- 2) Body section roenography apparatus
- 3) Fluoroscopic unit
- 4) Lieder's cassette holder
- 5) Grid for X-ray
- 6) Bucky's table
- 7) Film cassette for X-ray
- 8) Caliper
- 9) Goniometer
- 10) Lead frame
- 11) Lead protector for body
- 12) Lead impregnated gloves
- 13) Lead screen
- 14) Phantom for X-ray
- 15) Negatoscope
- 16) Film box
- 17) Magnet switch
- 18) Crest-voltage meter
- 19) Fluorescent meter
- 20) Electron meter
- 21) Oscilloscope
- 22) Image amplifier
- 23) Television for X-ray
- 24) Signal generator
- 25) Memory scope
- 26) Direct current amplifier
- 27) Microphotometer
- 28) Camera (body and lens)
- 29) Close up apparatus
- 30) Exposure meter
- 31) Printer
- 32) Enlarger
- 33) Focus meter
- 34) Safety light or filter
- 35) Clock for dark room

S.T. (Signature)

III-15



Cite N°

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

- 36) Aluminium ladder
- 37) Vacuum-tube voltmeter
- 38) Apparatus of close up for value form
- 39) Polaroid camera
- 40) Transformer
- 41) Resister
- 42) High frequency ammeter
- 43) Direct current voltmeter
- 44) Direct current ammeter
- 45) Alternating current voltmeter
- 46) Alternating current ammeter
- 47) Wattmeter
- 48) Earth resistance meter
- 49) Universal bridge
- 50) Direct current bridge
- 51) Direct current stabilizer
- 52) Tester
- 53) Cycle counter
- 54) Megger
- 55) Scintillation survey meter
- 56) Ionization box survey meter
- 57) Calculator
- 58) Film badge
- 59) Pocket chamber
- 60) Chager leader
- 61) Hand work set
- 62) Equipments for physical exercise
- 63) Equipments for chemical exercise.



Cite N°

MINISTERIO DE PREVISION SOCIAL Y SALUD PUBLICA
Bolivia

D) Health and sanitary technologist

- 1) Binocular microscope
- 2) Electric refrigerator
- 3) Pipette washer
- 4) Calculator
- 5) Blood cell counting chamber
- 6) Hemoglobinometer
- 7) Erythrocyte sedimentation test instrument
- 8) Sphygmomanometer
- 9) Stethoscope

E) Nutritional technologist

- 1) Column-chromatography
- 2) Fraction collector
- 3) PH meter
- 4) Spectrophotometer
- 5) Chemical balance
- 6) Direct reading balance
- 7) Roberval's balance
- 8) Table centrifuge
- 9) Electric refrigerator
- 10) Water bath
- 11) Water purifier
- 12) Pipette washer
- 13) Calculator
- 14) Magnetic stirrer
- 15) Cooking equipment

S.T. (A)

I-2 DAILY REPORT

The basic design survey team carried out a survey of the site situation and discussed matters with officials of the Government concerned and the relevant organizations at La Paz and Cochabamba as prescribed in the survey schedule;

- Apr. 15 ◦ Leave Tokyo to New York by JL006
- 16 ◦ Leave New York to La Paz
- 17 ◦ Arrive at La Paz by BN979
 - Courtesy call and briefing at the Embassy of Japan
- 18 ◦ Courtesy call to the Ministerio de Salud Publica
 - Meeting with the Minister and counterparts of Public Health regarding the proposed sites by Ministerio de Salud Publica.
- 19 ◦ Visit to CENTRO DE GASTROENTEROLOGIA, La Paz.
- 20 ◦ Survey of the proposed site at La Paz.
 - Survey of construction materials and its method
- 21 ◦ Discussion with Dr. Valle and Dr. Es Tensol regarding courses and curricula of the Institute.
- 22 ◦ Visit to ESCUELA DE SALUD PUBLICA.
 - Meeting at the Embassy of Japan to report the state of the proposed site at La Paz.
- 23 ◦ Leave La Paz to Cochabamba by LB813.
 - Survey of two proposed sites in Cochabamba.
- 24 ◦ Courtesy call and briefing to health officials and doctors concerned at Viedma Hospital.
 - Meeting with counterparts together with the team members (Dr. Tada, Dr. Hosaka, & Mr. Kondo)
 - Topographic survey of two proposed sites by Mr. Ogawa & Mr. Iwata.
 - Survey of construction materials, its method & utilities by Mr. Oda & Mr. Safu.

- 25 ◦ Meeting with counterparts, Dr. Tada, Dr. Hosaka, & Mr. Kondo.
 - Topographic survey of two proposed sites by Mr. Ogawa & Mr. Iwata.
 - Survey of construction materials, its method and utilities by Mr. Oda & Mr. Safu.
- 26 ◦ Internal discussion & planning.
- 27 ◦ Internal discussion & planning.
- 28 ◦ Meeting with counterparts, Dr. Tada, Dr. Hosaka & Mr. Kondo regarding medical equipment.
 - Visit to the Cochabamba Municipal Office to collect the Urban and Architectural Law and its regulations.
 - Topographic survey of the proposed site by Mr. Iwata.
 - Environmental survey by Mr. Safu.
 - Courtesy call to Cochabamba Municipal Office.
- 29 ◦ Examination on collected data.
 - Making a draft of the Minutes.
 - Visit to Viedma Hospital.
- 30 ◦ Leave Cochabamba to La Paz by LB814.
 - Meeting with Dr. Palazzi, the Minister of Public Health, counterparts, the team members regarding a decision to designate the project site in the draft minutes.
 - Meeting at the Embassy of Japan, informing the results of the site survey.
- May 1 ◦ Making a final minutes.
- 2 ◦ Signed & exchanged the Minutes by Dr. Palazzi and Dr. Tada at Ministerio de Salud Publica.
 - Meeting at the Embassy of Japan to report the surveyed results, having submitted one copy of the Minutes.
 - Leave La Paz to Miami by BN974.

- 3 ° Arrive at Miami, Florida.
- 4 ° Leave Miami to Tokyo via Los Angeles by PA440.
- 5 ° Arrive at Tokyo by JL061.

II. CONFIRMATION TEAM

II-1 AGREEMENT

AGREEMENT

ON THE BASIC DESIGN SURVEY FOR "ESCUELA TECNICA NACIONAL DE SALUD PUBLICA" IN COCHABAMBA, BOLIVIA.

In response to a request from the Government of the Republic of Bolivia for technical assistance on the construction project of ESCUELA TECNICA NACIONAL DE SALUD PUBLICA in Cochabamba, Bolivia, the Government of Japan through the Japan International Cooperation Agency (JICA) sent a survey team headed by Dr. Shozo Tada, assistant professor, School of Medicine, Toho University, to the Republic of Bolivia to carry out a basic design survey on this project from April 15 to May 5, 1980.

At that time the Ministry of Public Health of Bolivia, represented by the Minister, Dr. Hugo Palazzi, and the JICA's survey team, headed by Dr. Shozo Tada subscribed the "Minutes of Discussions" on May 2nd, 1980.

According to the "Minutes of Discussions" the Japanese counterpart submitted its draft report for its joint evaluation with the Bolivian counterpart.

Both parties coincided to evaluate the draft report as satisfactory to technical and academical requirements.

Therefore, the Minister of Public Health, Dr. Hugo Palazzi, and JICA's confirmation survey team, leader, Dr. Shozo Tada, give their conformity to the contents of the draft report.

Both parties agreed to give full and strict accomplishment to the contents of the report in order to warrant the successful implementation of the ESCUELA TECNICA NACIONAL DE SALUD PUBLICA" Project.

The major issues regarding the report, confirmed by the Bolivian and Japanese counterparts, are attached herewith in the annex.

S.T.

///... Hoja N°2.

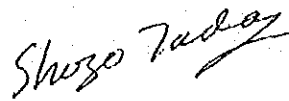
///.. Hoja N°2.

In signal of mutual agreement we fix our signatures.

La Paz, 17 th June, 1980.



Dr. Hugo Palazzi
Minister of
Public Health.



Dr. Shozo Tada
Leader
Japanese Confirmation
Survey team

A C U E R D O

Sobre el Estudio del Diseño BASICO para la "Escuela Técnica Nacional de Salud Pública" en Cochabamba - Bolivia.

Respondiendo a la solicitud formulada por el Gobierno de la República de Bolivia sobre asistencia técnica - para el Proyecto de construcción de la Escuela Técnica - Nacional de Salud Pública, el Gobierno del Japón a través de su Agencia Internacional de Cooperación (JICA) envió - a la República de Bolivia del 15 de abril al 5 de mayo - de 1980 una misión de estudio encabezada por el Dr. Shozo Tada, Profesor Asistente de la Escuela de Medicina de la Universidad "TOHO", para llevar a cabo el estudio de diseño básico de este proyecto.

En esa oportunidad el Ministerio de Previsión Social y Salud Pública de Bolivia, representado por el Ministro, Dr. Hugo Palazzi y la Misión de Estudio JICA, encabezada por el Dr. Shozo Tada suscribieron el 2 de mayo de 1980 las Minutas de las Discusiones.

De acuerdo con las "Minutas de las Discusiones" la - contraparte Japonesa presentó el informe preliminar para su evaluación conjunta con la contraparte Boliviana. Ambas partes consideran al mismo satisfactorio con los requerimientos técnicos y académicos.

Consiguientemente, el Ministro de Previsión Social y Salud Pública, Dr. Hugo Palazzi y el Jefe de la Misión -- JICA de confirmación del estudio, dan su conformidad al - Contenido del informe preliminar.

./.

ST.

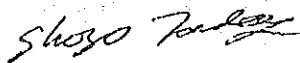
Ambas partes acuerdan dar cumplimiento estricto a todo el contenido del Informe con el objeto de garantizar la exitosa implementación del Proyecto "Escuela Técnica Nacional de Salud Pública".

Los aspectos más importantes en relación al informe y confirmado por las contrapartes Boliviana y Japonesa, se adjuntan en el anexo.

En constancia de mutuo acuerdo firmamos:



Dr. Hugo Palazzi
Ministro de Previsión -
Social y Salud Pública



Dr. Shozo Tada
Jefe
Misión Japonesa de
Confirmación del Estudio.

La Paz, 17 de junio de 1980.

II-2 DAILY REPORT

The confirmation team presented to the Government of Bolivia a draft report of the basic design survey prepared on the basis of the Minutes and findings during the previous visit, confirmed the agreements over the details of the proposed school and exchanged views on the prospective implementation schedule of the project.

- June. 13 ◦ Leave Tokyo to Los Angeles by JL062
- Leave Los Angeles to Mexico City by MX901
- 14 ◦ Leave Mexico City to Lima by AR385
- 15 ◦ Arrive at La Paz by LB973
- Meeting with team members
- 16 ◦ Courtesy call and briefing at the Embassy of Japan.
- Courtesy call to the Ministerio de Salud Publica and meeting with the Minister and counterparts.
 - Presenting and explaining a draft report.
 - Fixing the project name.
- 17 ◦ Making a draft each of the Agreement, English & Spanish.
- Survey of construction materials and its costs.
 - Signed & exchanged the Agreement by Dr. Palazzi and Dr. Tada at Ministerio de Salud Publica.
- 18 ◦ Meeting at the Embassy of Japan to report the Agreement having submitted one copy of the Agreement.
- Survey of construction materials and its costs.
- 19 ◦ Survey of construction materials and its costs.
- Final meeting with counterparts.
 - Meeting with team members.
 - Leave La Paz to New York by BN974.
- 20 ◦ Arrive at New York.
- 21 ◦ Leave New York by JL005
- 22 ◦ Arrive at Tokyo.

JICA

